

ODOR REDUCTION CORROSION ABATEMENT (ORCA)

A WATER ONE® SERVICES SOLUTION



Introducing the Next Generation of Odor and Corrosion Control

Evoqua's innovative Odor Reduction Corrosion Abatement (ORCA) solution provides superior odor control efficiency and corrosion protection through state-ofthe-art digitally enabled technology and proactive service.

With 24/7 remote monitoring, real-time automated dosing adjustments and automated alerts for proactive service, the ORCA solution ensures your odor control program is operating at peak performance.

Odor Reduction Corrosion Abatement (ORCA) Solution

DIGITAL. RELIABLE. SERVICE.

Evoqua's Odor Reduction Corrosion Abatement (ORCA) Solution combines smart technology and proactive service to ensure your odor control program is operating at peak performance. The ORCA solution provides accurate and reliable chemical dosing with system automation to handle changing levels of hydrogen sulfide in real-time, preventing harmful odors and protecting critical water infrastructure.

Evoqua's full-service ORCA program supports your odor and corrosion control treatment objectives with 24/7 remote monitoring and control. Your

digitally connected water systems are monitored daily by our in-house operations team consisting of water experts, program engineers and data scientists for enhanced service and site visibility. This provides more frequent system checks and flexibility with the remote adjustment of chemical dose rates, so your odor control program will be continuously protected.

You can count on Evoqua to be there when needed with nationwide customer support centers and 24/7 automated dispatch service. Our professional service technicians, engineers and customer service representatives are highly trained and experienced to help with all your odor control needs.









Evoqua's digitally enabled ORCA Solution with proactive service and 24/7 remote monitoring

The Evoqua Digital Advantage

Evoqua improves upon traditional approaches to water system management by leveraging decades of experience in water system design, an unmatched local service network and digital remote monitoring technology to deliver the quality and quantity of water you need—when you need it.

The full-service ORCA program includes Evoqua's award-winning Water One® services offering. This revolutionary service offering combines remote monitoring and data intelligence to provide proactive, predictive services with outcome-based water guarantees.

FEATURES & BENEFITS

Feature	Benefits
Remote Monitoring	24/7/365 remote monitoring of your water system with immediate notification of alarm conditions
System Alarms & Alerts	Automated system alarms and alerts for proactive maintenance to ensure consistency and accuracy
Digital Control	Advanced remote monitoring and control reduces utility and personnel risk
Tank Level Indicator	Chemical tank level visibility supports inventory management, leak monitoring, and minor dose deviations
Leak Detection	Identifies leaks in the dose skid boundary, tank interstitial space (double-walled tanks), and drastic tank level drops
	Pump Lockout minimizes spill volumes by securing dosing pumps
Predictive Pump Maintenance	Protects against issues of failure with predictive indication of pump maintenance requirements to facilitate a proactive response, maximizing uptime
Real-Time Automatic Dosing Adjustments	Chemical dose rate automatically adjusts in response to rain events, temperature changes, and more
	Chemical dose is eliminated when temperature is above/below programmable set points
Wifi Connectivity	User-friendly interface with Wifi connectivity
FCC & UL Certification	System complies with all FCC and UL standards

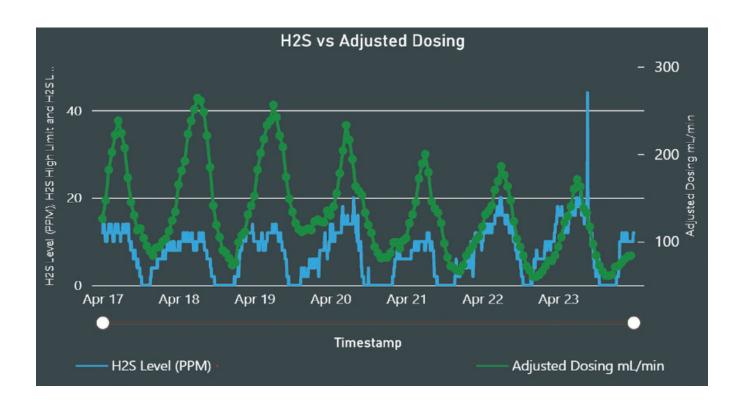
Accurate, Reliable, and Automated Chemical Dosing

Evoqua's ORCA solution has advanced, precise chemical dosing with predictive and automated capabilities.

ACCURATE AND RELIABLE DOSING IS ENABLED THROUGH:

- 168-point weekly dose curve that allows for programming a specific dose rate for each hour of the week and interpolates the dose rate between hourly setpoints to achieve precise odor control
- PPM dosing (flow proportional dosing) ensures
 the chemical dose rate will vary proportionally
 to the wastewater flow rate at specific part per
 million (PPM) concentration, which is programed
 into the 168-point weekly dose curve
- Flow event monitoring reduces the chemical dose rate on indication of a high flow event due to rain, snow melt, and more
- Chemical flow meter compares the actual chemical dose rate to the commanded chemical dose rate to monitor for variations

- Automatic dose correction / troubleshooting runs the chemical dosing pump through a specific series of steps to correct deviations between the commanded and actual chemical dose and will identify which component is causing the deviation if it is unable to be corrected
- Temperature compensation automatically adjusts the dose rate based on changes in wastewater temperature and eliminates the chemical dose entirely when the temperature is above or below programmable set points









ORCA SPECIFICATIONS

Dimensions	29.5" × 26" × 58" (L × W × H)
Power Requirements	120 v, 60 Hz, Single Phase
Capacity: ORCA 60	
Instantaneous	1,800 ml/min (684 gpd)
Average Daily	900 ml/min (342 gpd)
Discharge Pressure	100 psi
Capacity: ORCA 120	
Instantaneous	3,900 ml/min (1,482 gpd)
Average Daily	1,800 ml/min (684 gpd)
Discharge Pressure	60 psi

Note: The ORCA solution is compatible with nitrate, chlorite, and iron products.

EVOQUA'S ORCA SOLUTION COMES EQUIPPED WITH:

- 2 spare analog inputs for secondary chemical storage tank level indication, wastewater flow rate, and hydrogen sulfide
- 1 spare analog input for wastewater pH or ORP
- 3 digital inputs, which can be used to interlock chemical dosing pumps to wastewater pumps and/or calculate sewage flow rates
- Customer outputs—enables tank level and the system common alarm to be displayed on customer's SCADA. The common alarm provides indication of condition such as tank empty, tank high level, tank interstitial leak, and sump leak.



Driving Sustainability

Evoqua is committed to helping the world be more sustainable through our solutions and in our operations. Sustainable is a core value at Evoqua that is driven by our culture and comes to life in our work. Through our digitally enabled water treatment solutions, we can have a significant impact on sustainability for our organization and our customers.

- Digital insights empower our service professionals to optimize their routes reducing time on the road, fuel, and carbon emissions
- Our digital connected treatment systems ensure we achieve optimal dosing, reducing the amount of corrosive hydrogen sulfide consumed, better protecting critical water infrastructure
- Optimized service ensures maximum uptime and operations for customers leading to an increase in efficiency

We define our sustainability impact through our:







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